GOVERNMENT OF ANDHRA PRADESH

ABSTRACT

Industries & Commerce Department – "Electric Mobility Policy 2018-23" – Orders - Issued.

INDUSTRIES AND COMMERCE (P&I) DEPARTMENT

G.O.MS.No. 74 Dated: 08-06-2018

ORDER

1. Electric Vehicles also known as EVs, driven by high-density batteries or fuel cells, are becoming economical, fueled by falling prices of Lithium-ion batteries, increased research into fuel cells and cheaper renewable energy.

2. In this context, the Government of Andhra Pradesh has set for itself an ambitious target to be one amongst the three best States in India by 2022, the best State by 2029 and a leading global investment destination by 2050. Accordingly, the Government of Andhra Pradesh has identified Electric Mobility space to be robust growth driver in the years to come. It aims to be a frontrunner in building a sustainable transportation infrastructure by promoting Electric Mobility Ecosystem in Andhra Pradesh.

3. Government with a view to make Andhra Pradesh one of the major hubs for electric mobility, hereby introduces "Electric Mobility Policy 2018-23" after extensive consultations with stakeholders, Industrial Associations and Industrial experts. This Policy aims to support every aspect of Electric Mobility and accelerating adoption of Electric Vehicles that eventually lead to healthier climate. The detailed policy document is appended at Annexure-I.

4. Under the Electric Mobility Policy, Government approved the following benefits covering the areas of (1) Manufacturing (2) Charging Infrastructure (3) Demand Creation (4) Research and Development in order to make projects under these areas viable.

4.1. **Financial Support to Manufacturing Firms**

4.1.1. **Large Project** is defined as a project, with capital investment over the threshold of a Medium industry and upto INR 200 Crores or creating an employment for over 1000 people.

4.1.2. **Mega Project** is defined as a project with capital investment more than INR 200 Crores or creating an employment for over 2000 people.

4.1.3. **Mega Integrated Automobile Project:** The Mega Integrated Automobile Project will mean automobile projects that will have EV powertrain assembly, press shop, body shop, EV battery assembly or Fuel cell assembly, assembly line, paint shop etc. either on its own or in consortium or joint venture mode in the same location with investments over and above 1000 crore which will bring ancillary units of a minimum of INR 200 crore investment within 3 years.

4.1.4. **Ultra-Mega Battery Plant (UMBP):** A lithium Ion battery (or other advanced battery) plant setup for manufacturing batteries with an annual output of 1 GWh or above with a minimum investment of INR 1,000 Cr.

(P.T.O)

4.1.5. **Capital subsidy**:

(i) 25% of Fixed Capital Investment (FCI)) up to a maximum of INR 15 lakhs for Micro industries.

(ii) 20% of Fixed Capital Investment (FCI) up to a maximum of INR 40 lakhs for Small and INR 50 lakhs for Medium Industries.

(iii) 10% of Fixed Capital Investment (FCI) up to a maximum of INR 10 Crores for first two units, under Large industries, in each segment of Electric Vehicle (2 wheelers, 3 wheelers, 4 wheelers, buses), battery and charging equipment, hydrogen storage and fueling equipment manufacturing.

(iv) 10% of Fixed Capital Investment (FCI) up to a maximum of INR 20 Crores for first two units, under Mega category, in each segment of Electric Vehicle (2 wheelers, 3 wheelers, 4 wheelers, buses), battery and charging equipment, hydrogen storage and fueling equipment manufacturing.

(v) For specific clean production measures, as certified by Andhra Pradesh Pollution Control Board (APPCB), 35% subsidy on cost of plant & machinery for Micro, Small & Medium Enterprises (MSME) upto a maximum of INR 35 lakhs and 10% subsidy on cost of plant & machinery for Large projects upto a maximum of INR 35 lakhs.

(vi) 25% subsidy, for Micro Small and Medium Enterprises (MSMEs) and Large projects, for sustainable green measures on total Fixed Capital Investment (FCI) of the project (excluding cost of land, land development, preliminary and pre-operative expenses and consultancy fees) with a ceiling of INR 50 crore.

(vii) Special incentives will be given according to their need for Mega, Mega Integrated Automobile Projects and Ultra-Mega Battery Manufacturing Plants on a case to case basis.

4.1.6. **Stamp Duty**

(i) 100% of stamp duty and transfer duty paid by the industry on purchase or lease of land meant for industrial use will be reimbursed.

(ii) 100% of stamp duty for lease of land/shed/buildings, mortgages and hypothecations will be reimbursed.

4.1.7. **External Infrastructure Subsidy**

All external infrastructure such as power supply, water supply, roads will be provided at the doorstep of the industrial unit, charging & battery swapping stations at 50% of the cost of the infrastructure with an overall limit of INR 2 crores per project.

4.1.8. **Land**

In case of Mega Integrated Projects, Government will offer land to dependent ancillary units at the same rates as offered to respective Original Equipment Manufacturer (OEM) (wherever Government allocates land to OEM) up to a maximum of 50% of the land allocated to OEM.

4.1.9. **Power**

(i) Government of Andhra Pradesh will provide fixed power cost reimbursement @ Rs. 1.00 per unit for a period of five (5) years from the date of commencement of commercial production.

(Cont…)

(ii) The electricity duty will be reimbursed for a period of five (5) years.
(iii) A dedicated line along with special discount for night time/non-peak time usage will be offered for testing of BEV batteries based on requirements.

4.1.10. **Water**

(i) Water Supply will be made at 50% of the price of existing industrial supply tariff for the initial three (3) years from the date of commencement of commercial production.
(ii) The Government of Andhra Pradesh will provide water supply and also facilitate/support setup of water treatment plants in/around major auto hubs in order to meet this requirement wherever necessary.
(iii) In order to provide quality water, the Government of Andhra Pradesh will reimburse 25% of the cost of water treatment plant wherever necessary, with a limit of INR 2 crores on this subsidy.

4.1.11. **Tax Incentives**

100% net SGST accrued to the State will be reimbursed for a period of five (5) years for micro and small, seven (7) years for medium, ten (10) years for large industries. This reimbursement will be limited to 100% of capex or for the period Stated, whichever is earlier.

4.1.12. **Skill Development Incentives**

Stipend of INR 10,000 per employee per year to a maximum of first 50 employees for a single company for Micro, Small, Medium and Large firms.

4.1.13. **Marketing Incentives**

50% of cost of participation with a maximum amount of INR 5 lakhs to be reimbursed to a maximum of 10 MSME units per year for participating in International Trade Fairs.

4.1.14. **Industrial Parks & Clusters**

(i) The Government of Andhra Pradesh will allocate 500 to 1,000 acres of land for developing EV Parks with plug and play internal infrastructure, common facilities and necessary external infrastructure.
(ii) Developers of Auto Clusters and Automotive Suppliers Manufacturing Centers (ASMC) specific to Electric Vehicles shall be provided financial assistance of 50% of fixed capital investments in building and common infrastructure, up to a maximum of INR 20 crore.

4.1.15. **Recycling**

Battery recycling plants will be incentivized to mine for compounds from used batteries.

4.2. **Financial Incentives for Private Charging Stations & Hydrogen generation & refueling infrastructure**

(i) Direct-Current (DC) Chargers (100V and above): Capital Subsidy of 25% of the value of the charging station equipment/machinery for first 100 stations upto a maximum subsidy of INR 10,00,000

(Cont….)

(ii) Direct-Current (DC)Chargers (Below 100V): Capital Subsidy of 25% of the value of the charging station equipment/machinery for first 300 charging stations upto a maximum subsidy of INR 30,000

(iii) Capital subsidy of 25% of Fixed Capital Investment (for eligible assets excluding cost of battery inventory) up to a maximum subsidy of INR 10 lakhs for swapping stations for the first 50 stations

(iv) 100% net State Goods and Services Tax (SGST), accrued to the State, as reimbursement for purchase of fast chargers (DC chargers of capacity 100V and above).

(v) 100% net State Goods and Services Tax (SGST), accrued to the State, as reimbursement for purchase of advanced batteries for BATTERY ELECTRIC VEHICLES swapping

(vi) Capital subsidy of 25% of the Fixed Capital Investment (FCI), for hydrogen generation and fueling plants, with a maximum subsidy of INR 10 Crore/unit for the first 10 units.

4.3. Financial Incentives for Private Purchase and Use towards Demand Creation

(i) Reimbursement of registration charges and road tax on sale of Electric Vehicles until 2024.

(ii) Reimbursement of the Net State Goods and Services Tax (SGST) for services rendered, accrued to the State, for firms involved in services such as leasing of fleet of Electric Vehicles, owning or operating EV fleets and providing charging/battery swapping/Hydrogen Stations for recharging/refueling Electric Vehicles, until 2024.

4.4. R&D Grants

A research grant of INR 500 Cr will fund the most innovative solutions in the mobility space. This fund will support Center for Advanced Automotive Research (Research Labs working on battery, EV, EV component research etc), Center for Advancement of Smart Mobility (incubators, startups, prototyping centers etc are covered under this), Research Scholars and testing and quality labs as needed.

5. Other Initiatives by the Government

5.1. Targets of the Government

(i) Target to convert 100% of APSRTC bus fleet of over 11,000 buses into electric buses (Battery Electric Vehicles or Fuel Cell Electric Vehicles) by 2029, with the first phase of 100% conversion of bus fleet in top 4 cities by 2024.

(ii) Phase out all fossil fuel based commercial fleets and logistics vehicles in top 4 cities by 2024 and all cities by 2030.

(iii) All forms of Government vehicles, including vehicles under Government Corporations, Boards and Government Ambulances etc. will be converted to electric vehicles by 2024.

5.2. Investment by the Government departments

(i) The State Power Distribution Companies (DISCOMs) will invest in setting up both slow and fast charging networks in Government buildings and other public places. These charging points will be accessible to both Government as well as private vehicles.

(ii) DISCOMs will setup the charging infrastructure on its own or through third party operators using appropriate Public Private Partnership models. Such costs can be recovered as part of Aggregate Revenue Requirement (ARR).

(Cont…)

(iii) Andhra Pradesh State Road Transport Corporation (APSRTC) depots, bus terminals and bus stops will have charging stations.
(iv) Public parking spaces will be mandated to have charging stations.
(v) Government buildings will set a roadmap to setup charging or swapping stations in all of its parking spaces.
(vi) Charging infrastructure will be installed at least every 50 km on highways, other major roads etc.

5.3. Initiatives facilitating investments from private infrastructure developers

(i) Land across major cities will be allocated for private developers for setting up charging or battery swapping stations in a form similar to a contemporary fuel station as per statutory clearances.
(ii) Facilities will be provided to setup swapping stations in the form of a kiosk to service 2 and 3 wheelers.
(iii) Existing private buildings such as malls and other commercial buildings will be incentivized to setup charging/battery swapping stations.
(iv) All new permits for commercial complexes, housing societies and residential townships with a built-up area 5,000 sq.mt and above will mandate charging stations.
(v) DISCOM shall release supply to charging/battery swapping stations within 48 hours of application.
(vi) Municipalities shall issue provisional permissions online immediately to setup charging/battery swapping stations. Any verification shall only be post sanction of provisional permission.

5.4. City & Building codes

(i) City codes will be modified for both public places and private buildings in order to make the infrastructural changes needed for charging/battery swapping infrastructure.
(ii) Urban Local Bodies, Municipality rules/regulations will be modified to allow charging and battery swapping stations to be setup within its limits as and when required.

5.5. Energy sale

(i) A separate EV tariff category will be created.
(ii) Time of day sale of power to Battery Electric Vehicles will be considered to provide cheaper power during non-peak hours.
(iii) Andhra Pradesh Electricity Regulatory Commission (APERC) will issue regulations, defining tariff and related terms & conditions, for vehicle to grid (V2G) sale of power to meet the requirements of real time and ancillary services for DISCOM. Sale of power from battery swapping stations to the grid will also be considered as V2G sale of power.
(iv) Third party EV charging infrastructure providers will be allowed to procure power from DISCOM at regulator determined tariff and will be allowed to provide the charging service to Electric Vehicles.
(v) Third party EV charging service providers will be allowed to procure power through open access route from renewable energy sources irrespective of the size of the demand. APERC will determine the appropriate process and charges related to open access.
(vi) Third party EV charging service providers can also setup their own renewable energy generating stations at their premises for charging Electric Vehicles only.

(Cont…)

(vii) Cloud charging features will be encouraged in order to have all metering and transactions done digitally with payment apps, Near Field Communication (NFC) enabled devices, Radio Frequency Identification (RFID) tags etc. while keeping it flexible and customer friendly.

5.6. **Demand Creation**

(i) The cities of Vijayawada, Vishakhapatnam, Amaravati and Tirupati will be declared as Model Electric Mobility (EM) cities with phase-wise goals to adopt Electric Vehicles, charging & hydrogen refueling infrastructure and new EV enabling building codes.

(ii) Model EM cities will have a deadline to convert 100% of all commercial & logistics fleets to electric fleet by 2024. These fleets can belong to any Government Organization, APSRTC, Educational Institutes, Hospitals or Corporates and other institutions.

(iii) DISCOM will plan to setup 100 DC public charging stations in each of these cities.

(iv) Smart city proposals to the Central Government will include support for charging infrastructure and hydrogen fueling stations. Identified areas will be designated as "Green Zones" with entry only to non-fossil fuel based vehicles.

(v) These cities will develop specific goals of charging and Hydrogen refueling infrastructure density within a defined timeline linked to target for deployment of Electric Vehicles. These cities will create mobility blueprints and make provision in infrastructure needs to support the charging stations and EV only zones.

(vi) One or more of higher registration, renewal, parking fees, congestion charges, taxes/cess on sale, and limitation of entry into city limits etc. will be levied on sale/usage of highly polluting vehicles in order to support the switch to environmentally friendly vehicles.

5.7. **Revision of transport regulations for Electric Vehicles.**

(i) All regulations below are applicable only for Fuel cell Electric Vehicles using hydrogen fuel cells and Battery Electric Vehicles using advanced battery technologies with energy/power density similar or more than that of a Lithium Ion battery.

(ii) Electric Autos will be given permits on priority.

(iii) Low power Electric rickshaws will be allowed only in certain areas or outside major cities to avoid congestion.

(iv) Corporates will be allowed to own and operate electric 3-wheelers.

(v) Registration will be allowed for 2 wheelers, 3-wheelers and 4-wheelers retrofitted with an electric motor and an electric powertrain using advanced battery technologies and certified by Automotive Research Association of India (ARAI) or other Government recognized agency.

(vi) In order to avoid congestion in cities, Electric Vehicles will be mandated in cities while phasing out polluting vehicles in parallel.

(vii) The model EM cities will come up with a timeline for phasing out all fossil fuel based 3 and 4 wheelers in all vehicle fleets from corporates, medical institutions, and educational institutes and logistics providers by 2024. Eventually these restrictions will also be implemented in all cities within the State by 2030.

(viii) Electric Mobility blueprint will be created for the entire State for a phase wise transition to Electric Vehicles.

(ix) Registration of Electric Vehicles will be done online immediately.

5.8. **Smart Mobility Corporation**

A Corporation will be setup to coordinate all necessary activities for promoting futuristic needs of transportation.

(Cont…)

6. The policy will come into operation from the date of issue of this order and shall remain in force for five (5) years or upto 07.06.2023. Necessary amendments/orders will be issued by the Department of Energy, Department of Transport, Roads and Buildings (TR&B), Department of Municipal Administration and Urban Development and other concerned departments and Government Corporations. The incentives mentioned in the Policy will be extended to industries as per guidelines to be notified separately by the Commissioner of Industries.

7. This order is issued with the concurrence of Finance (FMU-REV-I&C) Department, vide their U.O.No.45027/498/FMU-REV- I&C) Department, dt:29.01.2018.

(BY ORDER AND IN THE NAME OF THE GOVERNOR OF ANDHRA PRADESH)

SOLOMON AROKIA RAJ
SECRETARY TO GOVERNMENT & CIP

To
Commissioner of Industries, Govt., of A.P, Vijayawada.
The VC & MD, APIIC, Vijayawada.
The MD, APSFC, Vijayawada.
The Water resources Department
The Revenue (Lands.) Department
The Revenue (CT) Department.
The Revenue (Regn.) Department.
The Energy Department.
The Municipal Administration & Urban Development department
The Transport, Roads and Buildings department
The MD, APSRTC.
The MD, APTRANSCO
All the Departments in the A.P. Secretariat.

Copy to
The Finance (Expr. Ind. & Com) Department.
The Law (H) Dept.
The I& I Dept.
The IG & Commissioner of Registration and Stamps, A.P., Vijayawada
The Commissioner of Commercial Taxes, Government of Andhra Pradesh, Vijayawada.
All the HODs under the administrative control of Ind.& Com. Dept.
The P.S. to C.S
The P.S. to Prl. Secy. to C.M.
The P.S. to Minister for Industries.
The P.S. to Secy.to Govt. & CIP., Ind. & Com. Dept.

//FORWARDED:: BY ORDER//

SECTION OFFICER

Annexure-I

(G.O.MS.No. 74, Ind. & Com. (P&I) Dept., Dt:08.06.2018)

ELECTRIC MOBILITY POLICY
2018-23

DEPARTMENT OF INDUSTRIES & COMMERCE
GOVERNMENT OF ANDHRA PRADESH

TABLE OF CONTENTS

1 Background 1

2 Definitions 2

3 Policy Validity 3

4 Policy Objectives, Targets and Strategy 4

5 Manufacturing 5

6 Charging Infrastructure 7

7 Hydrogen Generation and Refueling Infrastructure 8

8 Demand Creation 9

9 Research & Innovation Oriented Industrial development 11

10 Scope of policy 12

11 Nodal Organization 12

12 Skill development initiatives 12

13 Operational Guidelines 12

LIST OF ABBREVIATIONS

APERC	Andhra Pradesh Electricity Regulatory Commission
APSRTC	Andhra Pradesh State Road Transport Corporation
ARR	Aggregate Revenue Requirement
BEV	Battery Electric Vehicle
DC	Direct Current
EV	Electric Vehicle
FCEV	Fuel Cell Electric Vehicle
FCI	Fixed Capital Investment
GoAP	Government of Andhra Pradesh
GoI	Government of India
GW	Gigawatt
GWh	Gigawatt Hour
ICE	Internal Combustion Engine
MSME	Micro, Small & Medium Enterprise
OEM	Original Equipment Manufacturer
PPP	Public Private Partnership
RFID	Radio Frequency Identification
SGST	State Goods and Services Tax

1 BACKGROUND

1. Internal combustion engines (ICEs) are one of the key technological innovations that have facilitated faster and efficient movement of both people as well as goods. Over the decades, an improvement in their efficiency, an increase in oil drilling and innovation in manufacturing have brought considerable momentum to adoption and growth of automobiles and fueled economic growth. In the last decade, governments around the world have unanimously decided to pursue sustainable economic development with reformation of transportation at the center of the agenda.

2. Today, transportation is ready for yet another technological leap with the advent of vehicles running on alternative fuels and electricity. Globally, Electric Vehicles also known as EVs, driven by high-density batteries or fuel cells, are becoming economical, fueled by falling prices of Lithium-ion batteries, increased research into fuel cells and cheaper renewable energy.

3. Globally, various countries have been setting targets and formulating action plans for achieving full electric mobility. By 2020, China plans to have charging infrastructure to support 5 million EVs while Netherlands aims to achieve the target of 75,000 privately owned EVs by 2020. Norway has also seen a rapid increase in demand for EVs with heavy support through government subsidies[1].

4. Fuel Cell Electric Vehicles (FCEVs) are also gaining traction as seen through launch of Europe's -Hydrogen Mobility Europe (H2ME)[2]network, Japan's target of 40,000 hydrogen FCEV by 2020[3] and California's Fuel Cell Partnership (CaFCP)[4] to manufacture FCEVs & develop Hydrogen infrastructure in the United States.

5. The GoI has provided tremendous support for EVs through incentives under "Faster adoption and manufacturing of hybrid and electric vehicles" (FAME) Policy. The Ministry of New and Renewable Energy has also supported R&D and demonstration projects on various aspects of hydrogen energy including its production, storage and use as a fuel for generation of mechanical/thermal/electrical energy.

6. Indian manufacturers have started to transition towards Battery Electric Vehicles (BEV) 4-wheelers and buses. The Indian market is also seeing a large number of startups launching 2 and 3 wheeler BEVs. Tenders from Energy Efficiency Services Ltd (EESL) for purchasing electric cars and charging stations and tenders from individual state government transportation units (STU's) for purchasing/renting electric buses are seeing tremendous interest from both Indian as well as International manufacturers.

7. Within the context of the state of Andhra Pradesh, the State Government has set for itself an ambitious target to be one amongst the three best states in India by 2022, the best state by 2029 and a leading global investment

[1] www.theicct.org
[2] www.h2me.eu
[3] International Energy Agency, "An Industrial perspective on Hydrogen Energy"
[4] www.cafcp.org

destination by 2050. As part of the vision, the state is targeting to achieve sustainable double digit growth for the next decade and half. This requires the state to foster futuristic growth engines for sustainable growth.

8. Accordingly, the Government of Andhra Pradesh has identified Electric Mobility space to be robust growth driver in the years to come. It aims to be a frontrunner in building a sustainable transportation infrastructure by promoting Electric Mobility Ecosystem in Andhra Pradesh.

9. The Government understands that the transformation has to begin in cities over the next decade while the charging infrastructure & hydrogen stations are built to support the adoption of EVs. It is foreseen that adoption of EVs might begin with public transportation, stage carriers and commercial taxi & scooter fleet providers, given the comparable total cost of ownership between EVs and ICE vehicles in their usage model. As parity between the cost of an EV and ICE vehicle is achieved along with proliferation of charging infrastructure and hydrogen fueling stations on highways, the end of next decade could potentially see mass adoption of EVs.

10. The Government envisages Andhra Pradesh to be a prime destination for development and manufacturing of batteries, fuel cells, hydrogen generation and storage stations, Battery EVs (BEV) as well as Fuel cell EVs (FCEV), EV components and charging equipment not only for India but also for the world. The Government is fully committed to build a prosperous and healthy future for its citizens as well as bring affordable and environmentally sustainable technologies to global population. In this regard, this policy aims to support every aspect of Electric Mobility towards accelerating adoption of EVs that eventually lead to healthier climate.

11. The best-in-class environment for "Ease of Doing Business" along with competitive incentives provided in this Policy are expected to create a robust ecosystem for Electric Mobility in the State of Andhra Pradesh.

2 DEFINITIONS

12. **Electric Vehicle:** Electric Vehicle (EV) refers to automobiles using an electric motor that is driven by either batteries, ultra capacitors or fuel cells

13. **Battery Electric Vehicle:** The term battery electric vehicle (BEV) refers to automobiles with only electric motor and advanced batteries (to power the engine) with similar or more energy density than that of a Lithium Ion battery. Hybrid electric vehicles with fossil fuel based engines, are not covered under this policy.

14. **Fuel Cell Electric Vehicle:** Fuel Cell Electric Vehicle (FCEV) refers to the vehicle which uses a fuel cell in combination with a battery or supercapacitor, to power its on-board electric motor. Fuel cell in vehicles generate electricity to power the motor, by using hydrogen as fuel.

15. **Charging/Battery Swapping equipment:** Equipment that is exclusively used to charge the battery or swap the battery inside a BEV. These equipment can be installed at existing fuel stations or separate charging or battery swapping

stations. This policy doesn't cover incentives for manufacturing any supporting equipment (such as transformers, junction boxes etc.) that is not exclusive to BEV charging/swapping equipment.

16. **DISCOM** refers to Andhra Pradesh Eastern Power Distribution Company and Andhra Pradesh Southern Power Distribution Company.

17. **Electric Mobility Ecosystem:** This policy addresses various components and end products of the electric mobility ecosystem. Such an ecosystem encompasses the "Electric Vehicles and components such as Lithium Ion Batteries (or other advanced batteries with comparable energy/power densities), Super capacitors, Fuel cell systems, EV Charging equipment, Hydrogen generation, storage and refueling equipment, Battery swapping equipment, EV Motors & Controllers and other EV powertrain components, Battery management systems, EV electronics, electric harness etc. integral to the functioning of an EV.

18. **Fixed Capital Investment** (FCI): Fixed Capital Investment refers to Land, Building and Plant & Machinery, as specified in operating guidelines.

19. **Micro, Small and Medium Enterprise (MSME):** GoAP will follow the MSME definition laid out by GoI for MSME as per MSME Act 2006 (as amended from time to time). This policy specifies incentives for MSME firms manufacturing components and end products that are part of the electric mobility ecosystem.

20. **Large Project:** A unit, manufacturing intermediate components or end products that are part of the electric mobility ecosystem, with capital investment over the threshold of a medium enterprise and up to a maximum of INR 200 crore or creating employment for over 1000 people will be accorded Large project status.

21. **Mega Project:** A unit, manufacturing intermediate components or end products that are part of the electric mobility ecosystem, with capital investment of over INR 200 crore or creating employment for over 2000 people will be accorded Mega project status and tailor made incentives will be offered based on factors such as investment and technology.

22. **Mega Integrated Automobile Project:** The mega integrated automobile project will mean automobile projects that will have EV powertrain assembly, press shop, body shop, EV battery assembly or Fuel cell assembly, assembly line, paint shop etc. either on its own or in consortium or joint venture mode in the same location with investments over and above 1000 crore which will bring ancillary units of a minimum of INR 200 crore investment within 3 years.

23. **Ultra-Mega Battery Plant (UMBP):** A lithium Ion battery plant setup for manufacturing batteries with an annual output of 1 GWh or above with a minimum investment of INR 1,000 Cr.

3 POLICY VALIDITY

24. The policy will be valid for a period of 5 years from the notification.

4.1 Objectives

25.This Policy has the following Objectives

a. To make AP a global hub for electric mobility development and manufacturing.
b. Attract manufacturers across the EV ecosystem to the state to setup their manufacturing units and supply to a global market.
c. Promote innovation actively through grants and venture funds to research organizations, incubators, and startups working on next generation battery technology, fuel cell technologies, EV power trains and EV electronics.
d. To create best in class ecosystem via Industrial parks to hasten product development, manufacturing & testing.
e. Enable investment into charging/battery swapping infrastructure and hydrogen generation and fueling station development.
f. Create a skilled workforce which is attuned to the needs of EV ecosystem.
g. Promote usage of EVs to enable transition to environmentally friendly cities.
h. Build next generation transportation infrastructure using Vehicle to Everything (V2X) platforms.

4.2 Targets

26.This Policy aims to achieve the following targets:

a. Attract combined investments of over INR 30,000 Crore in the next 5 years across the electric mobility ecosystem with an employment potential for 60,000 people
b. Target to bring in manufacturing units of high density energy storage of at least 10GWh capacity in the next 5 years to cater to both domestic as well as export market.
c. Target to convert 100% of APSRTC bus fleet of over 11,000 buses into electric buses (BEVs/FCEVs) by 2029, with the first phase of 100% conversion of bus fleet in top 4 cities by 2024.
d. Phase out all fossil fuel based commercial fleets and logistics vehicles in top 4 cities by 2024 and all cities by 2030.
e. All forms of government vehicles, including vehicles under government corporations, boards and government ambulances etc. will be converted to electric vehicles by 2024.
f. Target to have 10 lakh EVs, combined across all segment of vehicles, by 2024.
g. Target to have 1,00,000 slow and fast charging stations by 2024[5].

4.3 Strategy

27.The GoAP wants to achieve its objectives by emphasizing on

a. Manufacturing of EV and its components
b. Charging Infrastructure
c. Hydrogen generation and Refueling infrastructure

[5]It is understood that as EV technology evolves, definition of a slow and fast charging station will change. This target will also be adjusted accordingly.

d. Demand creation for EVs
e. Research & Development

5 MANUFACTURING

28. Development of Electric Mobility Industrial Parks
    a. The GoAP will allocate 500 to 1,000 acres of land for developing EV Parks with plug and play internal infrastructure, common facilities and necessary external infrastructure.
    b. The parks will attract manufacturers across the EV ecosystem.
    c. An incubation center for handholding startups will also be planned in the EV Park.
    d. Developers of Auto Clusters and Automotive Suppliers Manufacturing Centers (ASMC) specific to EVs shall be provided financial assistance of 50% of fixed capital investments in building and common infrastructure, up to a maximum of INR 20 crore.

29. Infrastructural Support to Manufacturing Firms
    a. Land: In case of Mega integrated projects, government will offer land to dependent ancillary units at the same rates as offered to respective Original Equipment Manufacturer (OEM) (wherever Government allocates land to OEM) up to a maximum of 50% of the land allocated to OEM.
    b. Water: The GoAP will provide water supply and also facilitate/support setup of water treatment plants in/around major auto hubs in order to meet this requirement wherever necessary.
    c. Rail and Road Connectivity: The GoAP shall strive to construct elevated expressways to decongest roads to the industrial areas and will also look to ensuring better road access to ports.
    d. Export Oriented Units: For export focused units, the incentives as per the Export policy of the state shall be applicable, over and above what is made available under this policy.

30. Financial Support to Manufacturing Firms
    a. Capital subsidy of Fixed Capital Investment (FCI) in the following amounts:
        i. 25% of FCI up to a maximum of INR 15 lakhs for Micro industries
        ii. 20% of FCI up to a maximum of INR 40 lakhs for Small and 50 lakhs for Medium Industries
        iii. 10% of FCI up to a maximum of INR 10 Crores for first two units, under Large industries, in each segment of EV (2 wheelers, 3 wheelers, 4 wheelers, buses), battery and charging equipment, hydrogen storage & fueling equipment manufacturing.
        iv. 10% of FCI up to a maximum of INR 20 Crores for first two units, under Mega category, in each segment of EV (2 wheelers, 3 wheelers, 4 wheelers, buses), battery and charging equipment, hydrogen storage & fueling equipment manufacturing.
        v. Additionally, special incentives will be given according to their need for Mega, Mega Integrated automobile projects and Ultra-Mega battery manufacturing plants on a case to case basis.
        vi. For specific clean production measures, as certified by Andhra Pradesh Pollution Control Board (APPCB), 35% subsidy on cost of

plant & machinery for MSMEs upto a maximum of 35 lakhs and 10% subsidy on cost of plant & machinery for Large projects upto a maximum of 35 lakhs.

vii. 25% subsidy, for MSMEs and Large projects, for sustainable green measures on total FCI of the project (excluding cost of land, land development, preliminary and pre-operative expenses and consultancy fees) with a ceiling of INR 50 crore.

b. Stamp Duty
    i. 100% of stamp duty and transfer duty paid by the industry on purchase or lease of land meant for industrial use will be reimbursed.
    ii. 100% of stamp duty for lease of land/shed/buildings, mortgages and hypothecations will be reimbursed.
    iii. Stamp duty will be reimbursed only one time on the land. Stamp duty will not be waived on subsequent transactions on the same land.

c. External Infrastructure Subsidy
    i. All external infrastructure such as power supply, water supply, roads will be provided at the doorstep of the industrial unit, charging & battery swapping stations at 50% of the cost of the infrastructure with an overall limit of 2 crores per project.

d. Power
    i. AP is one of the three states selected under the centrally-sponsored "Power For All" scheme. GoAP is committed to supplying uninterrupted 24x7 quality power to all qualified EV related industries operating in the state. GoAP will provide dedicated feeders to all units involved in manufacturing components for EV as required.
    ii. GoAP will provide fixed power cost reimbursement @ 1.00 per unit for a period of 5 years from the date of commencement of commercial production. The power cost reimbursement for certain specific sector/sub-sector may be higher.
    iii. The electricity duty will be reimbursed for a period of 5 years.
    iv. A dedicated line along with special discount for night time/non-peak time usage will be offered for testing of BEV batteries based on requirements.

e. Water
    i. Water Supply will be made at 50% of the price of existing industrial supply tariff for the initial 3 years from the date of commencement of commercial production.
    ii. In order to provide quality water, the GoAP will reimburse 25% of the cost of water treatment plant wherever necessary, with a limit of 2 crores on this subsidy.

f. Tax Incentives
    i. 100% net SGST accrued to the state will be reimbursed for a period of 5 years for micro & small, 7 years for medium, 10 years for large industries. This reimbursement will be limited to 100% of capex or for the period stated, whichever is earlier.

g. Skill Development Incentives

i. Stipend of INR 10,000 per employee per year to a maximum of first 50 employees for a single company for Micro, Small, Medium and Large firms.

h. Marketing Incentives
   i. 50% of cost of participation with a maximum amount of 5 lakhs to be reimbursed to a maximum of 10 MSME units per year for participating in international trade fairs.

i. Recycling: Battery recycling plants will be incentivized to mine for compounds from used batteries.

6 CHARGING INFRASTRUCTURE

31. Investment by the Government departments
    a. The DISCOM will invest in setting up both slow and fast charging networks in government buildings and other public places. These charging points will be accessible to both government as well as private vehicles.
    b. DISCOM will setup the charging infrastructure on its own or through third party operators using appropriate PPP models. Such costs can be recovered as part of ARR.
    c. APSRTC depots, bus terminals and bus stops will have charging stations.
    d. Public parking spaces will be mandated to have charging stations.
    e. Government buildings will set a roadmap to setup charging or swapping stations in all of its parking spaces.
    f. Charging infrastructure will be installed at least every 50 km on highways, other major roads etc.

32. Investments from private infrastructure developers
    a. Land across major cities will be allocated for private developers for setting up charging or battery swapping stations in a form similar to a contemporary fuel station as per statutory clearances.
    b. Facilities will be provided to setup swapping stations in the form of a kiosk to service 2 and 3 wheelers.
    c. Existing private buildings such as malls and other commercial buildings will be incentivized to setup charging/battery swapping stations.
    d. All new permits for commercial complexes, housing societies and residential townships with a built-up area 5,000 sq.mt and above will mandate charging stations.
    e. DISCOM shall release supply to charging/battery swapping stations within 48 hours of application.
    f. Municipalities shall issue provisional permissions online immediately to setup charging/battery swapping stations. Any verification shall only be post sanction of provisional permission.

33. City & Building codes
    a. City codes will be modified for both public places and private buildings in order to make the infrastructural changes needed for charging/battery swapping infrastructure
    b. Urban local bodies, Municipality rules/regulations will be modified to allow charging and battery swapping stations to be setup within its limits as and when required.

34. Energy sale

a. A separate EV tariff category will be created.
b. Time of day sale of power to BEVs will be considered to provide cheaper power during non-peak hours.
c. APERC will issue regulations, defining tariff and related terms & conditions, for vehicle to grid (V2G) sale of power to meet the requirements of real time and ancillary services for DISCOM. Sale of power from battery swapping stations to the grid will also be considered as V2G sale of power.
d. Third party EV charging infrastructure providers will be allowed to procure power from DISCOM at regulator determined tariff and will be allowed to provide the charging service to EVs.
e. Third party EV charging service providers will be allowed to procure power through open access route from renewable energy sources irrespective of the size of the demand. APERC will determine the appropriate process and charges related to open access.
f. Third party EV charging service providers can also setup their own renewable energy generating stations at their premises for charging EVs only.
g. Cloud charging features will be encouraged in order to have all metering and transactions done digitally with payment apps, NFC enabled devices, RFID tags etc. while keeping it flexible and customer friendly.

35. Quality and standards
    a. Standards for charging equipment will also be created in close association with the central government departments and scientific bodies.
    b. The state will follow the charging specifications as per the guidelines issued by Department of Heavy Industries, GOI.

36. Financial Incentives for Private Charging Stations
    a. DC Chargers (100V and above): Capital Subsidy of 25% of the value of the charging station equipment/machinery for first 100 stations upto a Maximum subsidy of INR 10,00,000
    b. DC Chargers (Below 100V): Capital Subsidy of 25% of the value of the charging station equipment/machinery for first 300 charging stations upto a Maximum subsidy of INR 30,000
    c. Capital subsidy of 25% of Fixed Capital Investment (for eligible assets excluding cost of battery inventory) up to a maximum subsidy of 10 lakhs for swapping stations for the first 50 stations
    d. 100% net SGST, accrued to the state, as reimbursement for purchase of fast chargers (DC chargers of capacity 100V and above).
    e. 100% net SGST, accrued to the state, as reimbursement for purchase of advanced batteries for BEV swapping stations.

7 HYDROGEN GENERATION AND REFUELING INFRASTRUCTURE

37. The first few Hydrogen generation and refueling stations will be developed by government
38. Private developers will be allowed to setup hydrogen stations
39. The refueling station will be available at every 200 km.
40. APSRTC will have dedicated Hydrogen stations at their depots.

41. GoAP will also support in making appropriate changes in standards/policies at national level that are required for allowing the use of Type-3 and Type-4 cylinders to store the Hydrogen at high pressure at the refueling stations as well as on board in case of FCEVs.
42. In coordination with GOI, GoAP will also list out all the safety standards that need to be adhered to by developers of hydrogen generation and refueling stations.
43. Developers of Private Hydrogen Generation and Re-fueling Infrastructure will be eligible for - 100% net SGST, accrued to the state, as reimbursement for purchase of machinery for Hydrogen generation and refueling stations.
44. Financial Incentives
    a. Capital subsidy of 25% of the FCI, for hydrogen generation and fueling plants, with a maximum subsidy of INR 10 Crore/unit for the first 10 units.

8 DEMAND CREATION

45. Model Electric Mobility (EM) cities
    a. 2018-19 shall be announced as the "Year of the Electric Vehicle" in AP
    a. The cities of Vijayawada, Vishakhapatnam, Amaravati and Tirupati will be declared as model EM cities with phase-wise goals to adopt EVs, charging & hydrogen refueling infrastructure and new EV enabling building codes.
    b. Visakhapatnam will be the pilot city for all new initiatives
    c. Model EM cities will have a deadline to convert 100% of all commercial & logistics fleets to electric fleet by 2024. These fleets can belong to any government organization, APSRTC, educational institutes, hospitals or corporates and other institutions.
    d. DISCOM will plan to setup 100 DC public charging stations in each of these cities.
    e. Smart city proposals to the central government will include support for charging infrastructure and hydrogen fueling stations. Identified areas will be designated as "Green zones" with entry only to non-fossil fuel based vehicles.
    f. These cities will develop specific goals of charging and Hydrogen refueling infrastructure density within a defined timeline linked to target for deployment of EVs. These cities will create mobility blueprints and make provision in infrastructure needs to support the charging stations and EV only zones.
    g. One or more of higher registration, renewal, parking fees, congestion charges, taxes/cess on sale, and limitation of entry into city limits etc. will be levied on sale/usage of highly polluting vehicles in order to support the switch to environmentally friendly vehicles.
    h. Multiple government offices and public areas will be chosen for installing public charging equipment that can be used by all.
    i. GoAP will support CSR initiatives in the Electric mobility ecosystem, as per the guidelines of GOI
    j. PPP models in public transport, using purely EVs, will be offered based on selected routes/EV Zones.

46. Revision of transport regulations for EVs.

a. All regulations below are applicable only for FCEVs and BEVs using advanced battery technologies with energy/power density similar or more than that of a Lithium Ion battery.
b. Electric Autos will be given permits on priority.
c. Low power Electric rickshaws will be allowed only in certain areas or outside major cities to avoid congestion.
d. Corporates will be allowed to own and operate electric 3-wheelers.
e. Registration will be allowed for 2 wheelers, 3-wheelers and 4-wheelers retrofitted with an electric motor and an electric powertrain using advanced battery technologies and certified by ARAI or other government recognized agency.
f. In order to avoid congestion in cities, EVs will be mandated in cities while phasing out polluting vehicles in parallel.
g. The model EM cities will come up with a timeline for phasing out all fossil fuel based 3 and 4 wheelers in all vehicle fleets from corporates, medical institutions, and educational institutes and logistics providers by 2024. Eventually these restrictions will also be implemented in all cities within the state by 2030.
h. Electric mobility blueprint will be created for the entire state for a phase wise transition to EVs.
i. Registration of EVs will be done online immediately

47. Smart Mobility Corporation
    a. A corporation will be setup to coordinate all necessary activities for promoting futuristic needs of transportation.
    b. This organization will coordinate with various departments in central government as well as state governments to further the adoption of vehicles both for government as well as private use.
    c. It will also periodically review the incentives and suggest amendments as necessary.
    d. This corporation will also help adoption of futuristic technologies for EVs and associated infrastructure.

48. Communication
    a. The government notices that communication to create awareness amongst people is very crucial to further the growth of electric vehicle.
    b. Test rides in collaboration with various vehicle manufacturers, green days in the capital region and other cities will be promoted to take the new technology to the common man.

49. Financial Incentives for Private Purchase and Use
    a. Reimbursement of registration charges and road tax on sale of EVs until 2024.
    b. Phase wise/City wise, promotional discounted tariff will be offered for charging BEVs.
    c. Time of use tariff for BEV to be introduced
    d. Reimbursement of the Net SGST for services rendered, accrued to the state, for firms involved in services such as leasing of fleet of EVs, owning or operating EV fleets and providing charging/battery swapping/Hydrogen stations for recharging/refueling EVs, until 2024.

9 RESEARCH & INNOVATION ORIENTED INDUSTRIAL DEVELOPMENT

50. AP wants to be the hub not only for manufacturing but also for R&D focusing on next generation of battery management systems, drivetrain components, battery chemistries, fuel cell systems and intelligent transportation systems.

51. R&D Grants
    a. A research grant of INR 500 Cr will fund the most innovative solutions in the mobility space. Public or private research labs, incubators, startups that work on products and solutions in electric mobility space will also be provided land and office space to quickly setup their facility.
    b. Research scholars who move to the state to work for research in electric mobility and its components will be offered one time grant and incentivized via accommodation and transportation benefits.
    c. GoAP proposes to provide financial assistance towards expenses incurred for patent registration and for quality certifications. The financial assistance will be limited to 75% of the cost, subject to a maximum of 25 lakhs for obtaining patent registration and 50% of all charges, subject to a maximum of 5 Lakhs paid for obtaining quality certification. This would be applicable only to MSME's.

52. Centre for advanced automotive research (CAAR)
    a. The center will collaborate with research organizations like IISER, ISRO, IIT-Chennai and other domestic and foreign universities to foster centers of advance research in the domains of chemical, mechanical, electrical and electronics engineering.
    b. Focus will be on next generation battery chemistries, fuel cell systems, powertrains, automotive electronics and electrical road systems (ERS).
    c. The center will bring together universities in state and Indian and foreign researchers along with technology innovators for development of Vehicle to Everything (V2X) communication platform. V2X platforms include technologies such as Vehicle to Vehicle (V2V), Vehicle to Infrastructure (V2I), Vehicle to Grid (V2G), Vehicle to Device (V2D) and Vehicle to Pedestrians (V2P) etc.
    d. Commercialization of technology will be done via JV with private or public corporations.

53. Center for Advancement of Smart Mobility (CASM)
    a. This center will be setup in 100 acres of land along with a test track for all new electric vehicles and autonomous vehicles.
    b. This center will be a hub for startups, centers of excellence in electric mobility and prototyping centers for latest innovations.
    c. Well-funded incubators within CASM will bring in investors, banks and venture fund to finance innovative startups, provide fast track approvals and help them create a prototype and transition into viable businesses.
    d. Innovations pioneered here will be used not only in the Greenfield capital "Amaravati" but also in existing major cities of Visakhapatnam, Vijayawada and Tirupati. Autonomous vehicles will be given limited time period testing window to simulate performance under realistic conditions.

54. Testing and Quality control labs

a. In coordination with National automotive testing and R&D Infrastructure (NATRiP), GoAP shall strive to set-up quality testing center for EVs.
b. These facilities would be accessible to all manufacturers in the sector.

10 SCOPE OF POLICY

55. This policy is applicable only to EVs and the components (such as electric drive train, electronics, Fuel cell etc.) that are integral to its manufacturing and operation (Hydrogen infrastructure, BEV charging or BEV battery swapping infrastructure) only. Firms availing incentives under this policy will not be eligible for incentives under the Automobile policy or the industrial policy of the GoAP. Separate guidelines will be issued for implementation of this policy.

11 NODAL ORGANIZATION

56. The government will setup a high level committee consisting of stakeholders from all concerned departments. The government will issue new directives to the respective departments to include any support needed for furtherance of EV in their operational policy under ease of doing business.

12 SKILL DEVELOPMENT INITIATIVES

57. State will identify required quantum of skilled manpower, map EV specific skill sets and provide courses at different levels of education – matriculation and above. Local Industrial Training Institutes (ITIs), employment exchange centers, technical institutes will be prepared to introduce EV courses & train technicians and engineers.

58. Additional subsidy on training and stipend will be provided for every company with a cap on employees per type of firm.

13 OPERATIONAL GUIDELINES

59. Operating Guidelines for this policy will be issued separately.

SOLOMON AROKIA RAJ
SECRETARY TO GOVERNMENT & CIP